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EXAMINER	
CHANG, JUNGWON	
ART UNIT	**PAPER NUMBER**
2154	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/636,144	COVERDILL ET AL.	
	Examiner	Art Unit	
	Jungwon Chang	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/29/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-55 are presented for examination.

2. The IDS filed on 3/29/04 has been considered by the examiner.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 46-55 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. On page 21, paragraphs 0078-0079 of the specification, which recites in part:

> [0078] The term "***computer-readable medium***" as used herein refers to ***any medium*** that participates in providing instructions to processor 504 for execution. Such a medium may take many forms, including but not limited to, non-volatile media, volatile media, and transmission media. Non-volatile media includes, for example, optical or magnetic disks, such as storage device 510. Volatile media includes dynamic memory, such as main memory 506. Transmission media includes coaxial cables, copper wire and fiber optics, including the wires that comprise bus 502. Transmission media can also take the form of ***acoustic or light waves, such as those generated during radio wave and infrared data communications.***
>
> [0079] Common forms of ***computer-readable media include***, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, or any other magnetic medium, a CD-ROM, any other optical medium, punchcards, papertape, any other physical medium with patterns of holes, a RAM, a PROM, and EPROM, a FLASH-EPROM, any other memory chip or cartridge, ***a carrier wave*** as described hereinafter, or any other medium from which a computer can read.

The computer readable medium must be ***physical structure which provides the***

functional descriptive material in usable form to permit the functionality to be realized with the computer. ***A program product which does not explicitly include such a medium, a program per se, a signal or other type of transmission media that fails to include the hardware necessary to realize the functionality*** (e.g., a transmitter or a receiver), and a piece of paper with the functional descriptive material written on it are all examples of media which are not believed to enable the functionality to be realized with the computer. Therefore, claims 46-55 are non-statutory under 101.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-7, 10-14, 26-31, 34-41, 44-51, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 2002/0169861), hereinafter Chang, in view of Moriarty (US 7,124,173).

7. As to claims 1, 12 and 14, Chang discloses the invention as claimed, including a method for monitoring the availability of resources in a network (page 1, 0002), comprising the computer implemented steps of:

receiving an activity announcement *message* from a node in the network (page 3, 0049, "periodically sends heart beat messages");

determining that the node is potentially inactive if no successive activity announcement *message* is received from the node within a specified first time period (page 7, claim 9, "potentially failed node"); and

determining that the node is inactive if no successive activity announcement *message* is received from the node within a specified time period (page 4, 0064, "a grace period is established...adapter finally declared dead"; page 8, claim 16).

8. Chang discloses activity announcement *message*. However, Wang does not specifically disclose activity announcement packet. Moriarty discloses activity announcement packet (fig. 2; col. 7, lines 26-39 and 59-65). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Chang and Moriarty because Moriarty's activity announcement packet would improve the quality of service by using the information within the packet in order to determine the activity between a sender and a recipient (Moriarty; col. 4, lines 35-38; col. 7, lines 26-39).

9. As to claim 2, Chang discloses a method as recited in Claim 1, wherein the determining steps comprise the steps of:

initiating a first timer when the activity announcement *message* is received from the node (page 7, claim 9); and

initiating a second timer if no activity announcement *message* from the node is received again within expiration of the first timer (page 4, 0064; page 8, claim 16).

10. As to claim 3, Chang discloses a method as recited in Claim 1, further comprising the steps of:

sending an activity verification message to a node that has been determined to be inactive (page 3, 0049, "periodically sends heart beat messages"");

determining that the node is active if a response packet from the node is received within expiration of a specified verification timer (page 4, 0059, 0064).

11. As to claim 4, Chang discloses a method as recited in Claim 2, wherein a first time duration associated with the first timer and a second time duration associated with the second timer are configurable (page 4, 0059, "predefined period of time"; page 4, 0064, "grace period").

12. As to claim 5, Chang discloses a method as recited in Claim 1, wherein the specified first time and the specified second time are configurable (page 4, 0059, "predefined period of time"; page 4, 0064, "grace period").

13. As to claim 6, Chang discloses a method as recited in Claim 1, further comprising the step of determining that the node or a connection to the node is active if an activity announcement packet is received from the node within the specified first time period (page 4, 0064).

14. As to claim 7, Chang discloses a method as recited in Claim 1, further comprising

the step of tracking nodes from which activity announcement messages have been received by an index comprising address and connection status information for each such node (page 5, 0074 – page 6, 0075).

15. As to claims 10 and 13, they are rejected for the same reasons set forth in claim 1 above.

16. As to claim 11, Chang discloses a method as recited in Claim 1, further comprising the step of receiving network performance data, relating to the node, in association with the activity announcement message (page 5, 0074 – page 6, 0075).

17. As to claim 26, it is rejected for the same reasons set forth in claim 1 above.

18. As to claim 27, it is rejected for the same reasons set forth in claim 2 above.

19. As to claim 28, it is rejected for the same reasons set forth in claim 3 above.

20. As to claim 29, it is rejected for the same reasons set forth in claim 4 above.

21. As to claim 30, it is rejected for the same reasons set forth in claim 5 above.

22. As to claim 31, it is rejected for the same reasons set forth in claim 6 above.

23. As to claim 34, it is rejected for the same reasons set forth in claim 10 above.

24. As to claim 35, it is rejected for the same reasons set forth in claim 11 above.

25. As to claim 36, it is rejected for the same reasons set forth in claim 1 above. In addition, Chang discloses a processor; and one or more stored sequences of instructions that are accessible to the processor and which, when executed by the processor, cause the processor to carry out the steps (page 8, claim 18).

26. As to claim 37, it is rejected for the same reasons set forth in claim 2 above.

27. As to claim 38, it is rejected for the same reasons set forth in claim 3 above.

28. As to claim 39, it is rejected for the same reasons set forth in claim 4 above.

29. As to claim 40, it is rejected for the same reasons set forth in claim 5 above.

30. As to claim 41, it is rejected for the same reasons set forth in claim 6 above.

31. As to claim 44, it is rejected for the same reasons set forth in claim 10 above.

32. As to claim 45, it is rejected for the same reasons set forth in claim 11 above.

33. As to claim 46, it is rejected for the same reasons set forth in claim 1 above. In addition, Chang discloses a computer readable medium carrying one or more sequences of instructions for monitoring the availability of network resources, wherein the execution of the one or more sequence of instructions by one or more processors causes the one or more processors to perform the steps (page 8, claim 18).

34. As to claim 47, it is rejected for the same reasons set forth in claim 2 above.

35. As to claim 48, it is rejected for the same reasons set forth in claim 3 above.

36. As to claim 49, it is rejected for the same reasons set forth in claim 4 above.

37. As to claim 50, it is rejected for the same reasons set forth in claim 5 above.

38. As to claim 51, it is rejected for the same reasons set forth in claim 6 above.

39. As to claim 54, it is rejected for the same reasons set forth in claim 10 above.

40. As to claim 55, it is rejected for the same reasons set forth in claim 11 above.

41. Claims 8, 9, 32, 33, 42, 43, 52 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, Moriarty in view of Haynes et al. (US 6,993,681), hereinafter Haynes.

42. As to claim 8, Chang does not specifically disclose displaying, in a management application, the connection status of the nodes that are tracked in the index. However Haynes discloses displaying, in a management application, the connection status of the nodes that are tracked in the index (col. 14, line 31 – col. 15, line 27). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Wang, Moriarty and Haynes because Haynes's displaying the connection status of the nodes would allow remote administration in distributed system (Haynes, col. 1, lines 6-8; col. 2, lines 21-32).

43. As to claim 9, Chang discloses a method as recited in Claim 8, further comprising the step of periodically removing from the index entries for nodes that have remained inactive for a specified amount of time (abstract, "node deletion").

44. As to claims 32, 42 and 52, they are rejected for the same reasons set forth in claim 8 above.

45. As to claims 33, 43 and 53, they are rejected for the same reasons set forth in claim 9 above.

46. Claims 15-21 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, in view of Moriarty, Donzis et al. (US 6,976,071), hereinafter Donzis.

47. As to claim 15, Chang discloses a method for monitoring the availability of remote sites in a network (page 1, 0002), comprising the computer-implemented steps of:

receiving an activity announcement *message* from a router (network adapter) in the network (page 3, 0049, "periodically sends heart beat messages");

determining that the router is potentially inactive if no successive activity announcement *message* is received from the node within a specified first time period (page 7, claim 9, "potentially failed node"); and

determining that the router is inactive if no successive activity announcement *message* is received from the node within a specified time period (page 4, 0064, "a grace period is established...adapter finally declared dead"; page 8, claim 16).

48. Chang discloses activity announcement *message*. However, Wang does not specifically disclose activity announcement packet. Moriarty discloses activity announcement packet (fig. 2; col. 7, lines 26-39 and 59-65). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Wang and Moriarty because Moriarty's activity announcement packet would improve the quality of service by using the information within the packet in order

to determine the activity between a sender and a recipient (Moriarty; col. 4, lines 35-38; col. 7, lines 26-39).

Chang does not specifically disclose a virtual private network. Donzis discloses virtual private network (col. 1, lines 35-59). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Wang and Donzis because Donzis' VPN would provide communications protected by a security protocol (Donzis, col. 1, lines 35-59).

49. As to claim 16, Chang discloses a method as recited in Claim 15, wherein the determining steps comprise the steps of:

initiating a first timer when the activity announcement *message* is received from the router (page 7, claim 9); and

initiating a second timer if no activity announcement *message* from the router is received again within expiration of the first timer (page 4, 0064; page 8, claim 16).

50. As to claim 17, Chang discloses a method as recited in Claim 16, wherein the specified first time and the specified second time are configurable (page 4, 0059, "predefined period of time"; page 4, 0064, "grace period").

51. As to claims 18-21 and 23-25, Chang discloses determining that the router and the connection to said router is inactive if no activity announcement packet is received

from the router is received after the first or second timer expires (page 4, 0064; page 5, 0074 – page 6, 0075).

52. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, in view of Moriarty, Donzis in view of Haynes et al. (US 6,993,681), hereinafter Haynes.

53. As to claim 22, Chang does not specifically disclose displaying, in a management application, the connection status of the nodes that are tracked in the index. However Haynes discloses displaying, in a management application, the connection status of the nodes that are tracked in the index (col. 14, line 31 – col. 15, line 27). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Chang, Moriarty, Donzis and Haynes because Haynes's displaying the connection status of the nodes would allow remote administration in distributed system (Haynes, col. 1, lines 6-8; col. 2, lines 21-32).

Conclusion

54. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Dhingra, US 7,167,912, Jiang et al, US 2004/0042438, Harvell, US 6,834,302, Knop, US 2003/0158936, Wang et al, US 7,260,066, Moshiri-Tafreshi et al, US 2002/0160812, Kawamura, US 2003/0055882 disclose a method and system for identifying the monitored component as failed if one or more request packets are sent but no response

packets are received during a designated monitoring period.

55. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jungwon Chang whose telephone number is 571-272-3960. The examiner can normally be reached on 6:30-2:00 (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

September 10, 2007

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